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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/608,548	06/30/2000	Lincoln Dale	CISCP171	2364

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EXAMINER

CHOUDHARY, ANITA

ART UNIT	PAPER NUMBER
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2153

DATE MAILED: 07/02/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

09/608,548

Applicant(s)

DALE ET AL.

Examiner

Anita Choudhary

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

Claims 1-32 are pending.

### *Priority*

No claim priority has been made in this application.

The effective filing date for the subject matter defined in the pending claims in the application is June 30, 2000.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 6, 10, 15, 20, 24, and 29-32, is rejected under 35 U.S.C. 102(e) as being anticipated by Bernstein et al. (US 6,157,644).

In referring to claims 1, 15, 29, and 31, Bernstein shows a computer system (fig. 6) for accelerating the routing of communication packets through a network including a forwarding table for matching destinations addresses on an incoming packet to a destination device.

Bernstein shows:

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- A means for receiving a packet (col. 6 lines 15-18; fig. 9, 900)
- Inputting at least a portion of the packet (destination address) into a content addressable memory (CAM) (col. 5 lines 45- 47; col. 6 lines 19-28, fig. 9 906,908)
- Obtaining a result from the CAM to indicate a selected processing device to which the received packet is to be sent (col. 7 line 12-20, fig. 9 item “yes”, 910, 912)
- And sending the received packet to the indicated processing device (col. 7 lines 20-22, fig. 9 item 914).

In referring to claim 10, 24, 30 and 32, Bernstein shows a method for traffic distribution among devices comprising:

Generating a plurality of entries within a content addressable memory (col. 5 lines 45-47, col. 7 lines 4-7 fig. 9, 912).

Each entry including a set of bit values that corresponding to at least a portion of the packet (destination address) (“ IP destination address” fig. 7, col. 5 line 66- col. 6 line 8).

Each entry including one of more destination fields indicating where to send a packet that matches the entry’s set of bit values (“Layer 2 address” fig. 7, col. 5 line 66- col. 6 line 8).

In referring to claim 6 and 20, Bernstein further shows received packet into CAM is selected from a group consisting of destination address, a destination port, a source address, a source port and a protocol (fig. 2-4, col. 1 lines 41-65).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4, 7-9, 11, 12, 16-18, 21, 23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernstein in view of Cohen et al. (US 6,389,462).

In referring to claim 2, 8, 16, although Bernstein shows substantial features of the claimed invention, Bernstein does not show a cache system. Nonetheless redirecting to a cache system is well known in the art, and would have been an obvious modification to the system disclosed by Bernstein as evidenced by Cohen.

In an analogous art, Cohen shows a system for directing client requests to a selected one of a plurality of cache systems (col. 7 lines 36-48).

Given this feature, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system shown by Bernstein to employ the feature shown by Cohen in order to conserve network resources by responding to client request on a local network instead of using resources to access data over the Internet (see Cohen col. 1 lines 12-23).

In referring to claim 3 and 17, Cohen shows the results of a redirection result indicating the packet being sent to another destination than the one specified in a received packet (col. 7 lines 12-35).

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In referring to claim 4, 12, and 18, Bernstein shows a processing device identification (layer 2 address) corresponding to the selected device to which the received packet is to be sent (fig. 7, col. 5 line 66- col. 6 line 8).

In referring to claim 7 and 21, Bernstein further shows a plurality of entries in CAM including bits-to-match field (IP destination address) an action field (destination port) and a redirection destination field (Layer 2 address). (fig. 7 col. 5 lines 66- col. 6 line 8).

In referring to claim 9, 11, 23, and 25, Bernstein shows the action field (layer 2 address) indicating whether the received packet is to be redirected (by being matched in the table) (col. 6 line 24-27).

Claim 5, 13, 14, 19, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernstein in view of Kempke et al. (US 5,847,874).

In referring to claim 5, 14, 19 and 28, although Bernstein shows substantial features of the claimed invention, Bernstein does not show content addressable memory as a ternary CAM. Nonetheless this feature is well known in the art, and would have been an obvious modification to the system disclosed by Bernstein as evidenced by Kempke.

In an analogous art, Kempke shows a system for ternary cam for matching input information to produce an output (col. 4 lines 1-11).

Given this feature, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system shown by Bernstein to employ the feature shown by Kempke in order to have a retrieval system superior to binary CAM in comparison operations for address mapping (see Kempke, col. 4 lines 9-11).

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In referring to claim 13 and 27, Kempke shows set of bit values includes at least a 1 or a 0 and "don't care" value (col. 17-20).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Andersson (US 6,134,135) shows a CAM memory device.

Hausman et al. (US 5,473,607) shows a system for filtering packets to a destination.

Videlock et al. (US 5,136,580) shows a system for filtering destination and source addresses in a LAN.

Nizar et al. (US 5,696,976) shows a system for determining which processor should service a request.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anita Choudhary whose telephone number is (703) 305-5268. The examiner can normally be reached on 9am-5pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (703) 305-4792. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

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June 27, 2003



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